

Parallel Lines - b.1 p257

Transversal

perpendicular =  $90^\circ$

① CAT - Complementary Angle Theorem  
 $x + y = 90^\circ$

② SAT - Supplementary Angle Theorem  
 $x + y = 180^\circ$

③ (Sum of int  $\Delta$ )  
 $x + y + z = 180^\circ$

④ (sum of int quad)  
 $w + x + y + z = 360^\circ$

⑤ (pnt)  
opposite angles in an intersection are equal  
 $x = x$   
 $y = y$

May 6-12:06 PM

Parallel Angle Theories

Com interior (C pattern)

(E pattern)  
Z pattern  
F pattern

$x + y = 180^\circ$

$w + z = 180^\circ$

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Corresponding Angles (F pattern)

- Corresponding angles are equal

Corresponding angles are equal:  $x = x$ ,  $y = y$ ,  $z = z$ ,  $r = r$

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Alternate Angles (Z pattern)

alternate angles are equal

Alternate angles are equal:  $x = x$ ,  $y = y$ ,  $z = z$

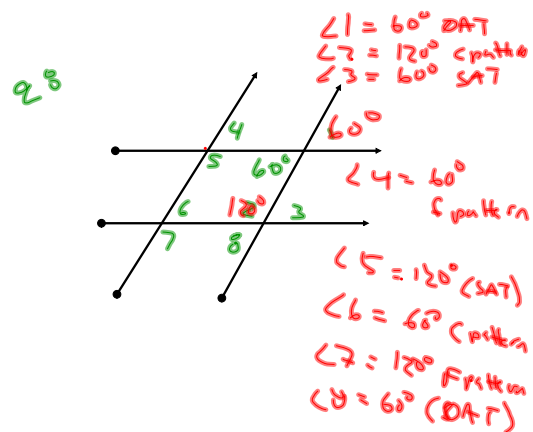
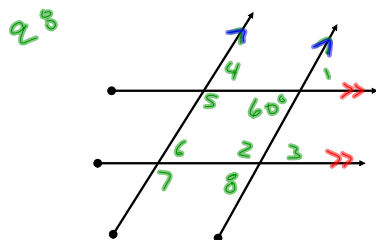
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$\angle b = 70^\circ$  (CAT)  
 $\angle a = 110^\circ$  (SAT)  
 $\angle c = 110^\circ$  (CAT)  
 $\angle e = 70^\circ$  (F pattern)

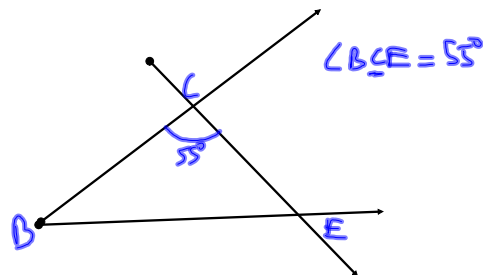
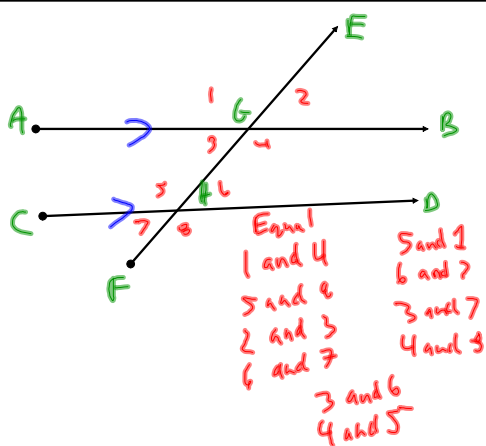
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$\angle b = 70^\circ$  (CAT)  
 $\angle a = 110^\circ$  (SAT)  
 $\angle c = 110^\circ$  (CAT)  
 $\angle f = 70^\circ$  (F pattern)  
 $\angle e = 70^\circ$  (CAT)  
 $\angle d = 110^\circ$  (SAT)  
 $\angle g = 110^\circ$  (CAT)

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HMWK p 360 q. 6-10,<sup>s4</sup> 11

May 7-2:36 PM



May 7-3:00 PM